



U.S. ENVIRONMENTAL PROTECTION AGENCY

Office of Pesticide Programs
Registration Division (7505P)
1200 Pennsylvania Ave., N.W.
Washington, D.C. 20460

EPA Reg. Number:

5905-606

Date of Issuance:

9/14/17

NOTICE OF PESTICIDE:

Registration
 Reregistration
(under FIFRA, as amended)

Term of Issuance:

Conditional

Name of Pesticide Product:

HM-1570 Insecticide

Name and Address of Registrant (include ZIP Code):

Helena Chemical Company
225 Schilling Blvd., Suite 300
Collierville, TN 38017

Note: Changes in labeling differing in substance from that accepted in connection with this registration must be submitted to and accepted by the Registration Division prior to use of the label in commerce. In any correspondence on this product always refer to the above EPA registration number.

On the basis of information furnished by the registrant, the above named pesticide is hereby registered under the Federal Insecticide, Fungicide and Rodenticide Act.

Registration is in no way to be construed as an endorsement or recommendation of this product by the Agency. In order to protect health and the environment, the Administrator, on his motion, may at any time suspend or cancel the registration of a pesticide in accordance with the Act. The acceptance of any name in connection with the registration of a product under this Act is not to be construed as giving the registrant a right to exclusive use of the name or to its use if it has been covered by others.

This product is conditionally registered in accordance with FIFRA section 3(c)(7)(A). You must comply with the following conditions:

1. Submit and/or cite all data required for registration/reregistration/registration review of your product under FIFRA when the Agency requires all registrants of similar products to submit such data.

Signature of Approving Official:

Venus Eagle, Product Manager 01
Invertebrate-Vertebrate Branch 3, Registration Division (7505P)

Date:

9/14/17

2. You are required to comply with the data requirements described in the DCI identified below:

a. Acetamiprid GDCI-099050

You must comply with all of the data requirements within the established deadlines. If you have questions about the Generic DCI listed above, you may contact the Chemical Review Manager in the Pesticide Reevaluation Division: <http://iaspub.epa.gov/apex/pesticides/f?p=chemicalsearch:1>

3. The data requirements for storage stability and corrosion characteristics (Guidelines 830.6317 and 830.6320) are not satisfied. A one year study is required to satisfy these data requirements. You have 18 months from the date of registration to provide these data.

4. Make the following label changes before you release the product for shipment:

- Revise the EPA Registration Number to read, "EPA Reg. No. 5905-606."

5. Submit one copy of the final printed label for the record before you release the product for shipment.

Should you wish to add/retain a reference to the company's website on your label, then please be aware that the website becomes labeling under the Federal Insecticide Fungicide and Rodenticide Act and is subject to review by the Agency. If the website is false or misleading, the product would be misbranded and unlawful to sell or distribute under FIFRA section 12(a)(1)(E). 40 CFR 156.10(a)(5) list examples of statements EPA may consider false or misleading. In addition, regardless of whether a website is referenced on your product's label, claims made on the website may not substantially differ from those claims approved through the registration process. Therefore, should the Agency find or if it is brought to our attention that a website contains false or misleading statements or claims substantially differing from the EPA approved registration, the website will be referred to the EPA's Office of Enforcement and Compliance.

If you fail to satisfy these data requirements, EPA will consider appropriate regulatory action including, among other things, cancellation under FIFRA section 6(e). Your release for shipment of the product constitutes acceptance of these conditions. A stamped copy of the label is enclosed for your records. Please also note that the record for this product currently contains the following CSFs:

- Basic CSF dated 12/19/2016

If you have any questions, please contact Jacquelyn Herrick by phone at 703-347-0559, or via email at herrick.jacquelyn@epa.gov.

Enclosure

RESTRICTED USE PESTICIDE

Due to eye toxicity. For retail sale to and use only by Certified Applicators or persons under their direct supervision and only for those uses covered by the Certified Applicator's Certification.

GROUP

4A

INSECTICIDE

HM-1570 Insecticide
For Agricultural Use Only

ACTIVE INGREDIENT: By Wt.

Acetamiprid, (E)- N₁ -[(6-chloro-3-pyridyl)methyl]-N₂-cyano-N₁-methyl acetamidine 32.46%

OTHER INGREDIENTS: 67.54%

TOTAL: 100.00%

Contains 3.0 lbs acetamiprid per gallon.

KEEP OUT OF REACH OF CHILDREN
DANGER - PELIGRO

Si usted no entiende la etiqueta, busque a alguien para que se la explique a usted en detalle.
(If you do not understand the label, find someone to explain it to you in detail.)

FIRST AID	
If in eyes:	<ul style="list-style-type: none"> • Hold eye open and rinse slowly and gently with water for 15-20 minutes. • Remove contact lenses, if present, after the first 5 minutes, then continue rinsing. • Call a poison control center or doctor for treatment advice.
If swallowed:	<ul style="list-style-type: none"> • Immediately call a poison control center or doctor for treatment advice. • Do not induce vomiting unless told to do so by a poison control center or doctor. • Have person sip a glass of water if able to swallow. • Do not give anything by mouth to an unconscious person.
HOT LINE NUMBER	
Have the product container or label with you when calling a poison control center or doctor, or going for treatment. You may also contact 1-800-424-9300 for emergency medical treatment information.	
NOTE TO PHYSICIAN: There is no specific antidote. All treatment should be based on observed signs and symptoms of distress in the patient. Probable mucosal damage may contraindicate the use of gastric lavage.	

See inside label booklet for additional Precautionary Statements and Directions for Use including Storage and Disposal instructions.

EPA Reg. No. 5905-xxx
EPA Est. No.

AD xxxxxx
NET CONTENTS:

Manufactured for:
Helena Chemical Company
225 Schilling Boulevard, Suite 300
Collierville, TN 38017



PRECAUTIONARY STATEMENTS
HAZARDS TO HUMANS AND DOMESTIC ANIMALS
DANGER

Corrosive. Causes irreversible eye damage. Harmful if swallowed. Do not get in eyes or on clothing. Wear protective eyewear such as goggles or face shield.

PERSONAL PROTECTIVE EQUIPMENT (PPE)

Mixers, loaders, applicators, and other handlers must wear

- long-sleeved shirts, long pants, shoes plus socks,
- protective eye-wear such as goggles or face shield
- chemical resistant gloves made out of the following waterproof material butyl rubber \geq 14 mils or barrier laminate \geq 14 mils
- chemical resistant headgear for overhead exposure.

Discard clothing and other absorbent materials that have been drenched or heavily contaminated with this product's concentrate. Do not reuse them. Follow manufacturer's instructions for cleaning/maintaining PPE. If there are no such instructions for washables, use detergent and hot water. Keep and wash PPE separately from other laundry.

When handlers use closed systems, enclosed cabs, or aircraft in a manner that meets the requirements listed in the Worker Protection Standard (WPS) for agricultural pesticides [40 CFR 170.240 (d)(4-6)], the handler PPE requirements may be reduced or modified as specified in the WPS

USER SAFETY RECOMMENDATIONS

Users should:

- Wash hands before eating, drinking, chewing gum, using tobacco or using the toilet.
- Remove clothing/PPE immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.
- Remove PPE immediately after handling this product; wash the outside of gloves before removing. As soon as possible, wash thoroughly and change into clean clothing.

PHYSICAL OR CHEMICAL HAZARDS

Do not mix or allow coming in contact with oxidizing agent. Hazardous chemical reaction may occur.

ENVIRONMENTAL HAZARDS

This product is toxic to birds and aquatic invertebrates. This product is toxic to bees exposed to direct treatment. Do not apply this product while bees are foraging in the treatment area. Do not apply directly to water, or to areas where surface water is present, or to intertidal areas below the mean high water mark. Do not contaminate water when disposing of equipment washwater or rinsate. Do not contaminate water used for irrigation or domestic purposes.

Ground Water Advisory

This chemical has properties and characteristics associated with chemicals detected in ground water. This chemical may leach into ground water if used in areas where soils are permeable, particularly where the water table is shallow.

Surface Water Advisory

This product may impact surface water quality due to runoff of rain water. This is especially true for poorly draining soils and soils with shallow ground water. This product is classified as having high potential for

reaching surface water via runoff for several months or more after application. Avoid accidental or intentional application of this product to ditches, swales, drainage ways or impervious surfaces such as driveways. Runoff of this product to surface water will be reduced by avoiding applications when rainfall is forecasted to occur within 48 hours.

DIRECTIONS FOR USE

It is a violation of Federal law to use this product in any manner inconsistent with its labeling. Read entire label before using this product.

Do not apply this product in a way that will contact workers or other persons, either directly or through drift. Only protected handlers may be in the area during application. For any requirements specific to your State or Tribe, consult the agency responsible for pesticide regulation.

AGRICULTURAL USE REQUIREMENTS

Use this product only in accordance with its labeling and with the Worker Protection Standard, 40 CFR part 170. This standard contains requirements for the protection of agricultural workers on farms, forests, nurseries, and greenhouses, and handlers of agricultural pesticides. It contains requirements for training, decontamination, notification, and emergency assistance. It also contains specific instructions and exceptions pertaining to the statements on this label about personal protective equipment (PPE) and restricted-entry intervals. The requirements in this box only apply to uses of this product that are covered by the Worker Protection Standard.

Do not enter or allow worker entry into treated areas during the restricted entry interval (REI) of 12 hours.

PPE required for early entry to treated areas that is permitted under the Worker Protection Standard and that involves contact with anything that has been treated, such as plants, soil, or water, is coveralls, waterproof gloves and shoes plus socks.

STORAGE AND DISPOSAL

Do not contaminate water, food or feed by storage or disposal.

PESTICIDE STORAGE: ALWAYS STORE PESTICIDES IN THE ORIGINAL CONTAINER. Store away from food, pet food, feed, seed, fertilizers, veterinary supplies, and the home. The storage area must be locked, dry, cool, well-lit, and well-ventilated. Do not store where temperatures exceed 115°F (46°C).

PESTICIDE DISPOSAL: Pesticide wastes may be hazardous. Improper disposal of excess pesticide spray mixture or rinsate is a violation of Federal Law. If these wastes cannot be disposed of by use according to local instructions, contact your state Pesticide or Environmental Control Agency or the Hazardous Waste Representative at the nearest EPA Regional Office for guidance.

CONTAINER DISPOSAL:

NONREFILLABLE CONTAINER (EQUAL TO OR LESS THAN 5 GALLONS): Do not reuse or refill this container. Triple rinse container (or equivalent) promptly after emptying. Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank and drain for 10 seconds after the flow begins to drip. Fill the container ¼ full with water and recap. Shake for 10 seconds. Pour rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Drain for 10 seconds after the flow begins to drip. Repeat this procedure two more times. Offer for recycling, if available.

NONREFILLABLE CONTAINER (GREATER THAN 5 GALLONS): Do not reuse or refill this container. Triple rinse container (or equivalent) promptly after emptying. Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank. Fill the container ¼ full with water. Replace and tighten closures. Tip container on its side and roll it back and forth, ensuring at least one complete revolution, for 30 seconds. Stand the container on its end and tip it back and forth several times. Turn the container over onto its other end and tip it back and forth several times. Empty the

rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Repeat this procedure two more times. Offer for recycling, if available.

REFILLABLE CONTAINER: Refill this container with pesticide only. Do not reuse this container for any other purpose. Cleaning the container before final disposal is the responsibility of the person disposing of the container. Cleaning before refilling is the responsibility of the refiller. To clean the container before final disposal, empty the remaining contents from this container into application equipment or mix tank. Fill the container about 10 percent full with water. Agitate vigorously or recirculate water with the pump for 2 minutes. Pour or pump rinsate into application equipment or rinsate collection system. Repeat this rinsing procedure two more times.

SPRAY DRIFT

Weather and equipment are the predominant factors in determining spray drift, and applications must not be made when weather conditions or equipment settings/function may lead to drift outside of the intended application area. Use nozzle and pressure combinations that distribute MEDIUM spray droplets (see nozzle manufacturer's catalogs and ASAE Standard S-572) when applying this product by air. Aerial applications must NOT be made during temperature inversions or when wind speed is greater than 10 mph in order to avoid spray drift. *The applicator is responsible for preventing spray drift from the target area.*

The interaction of many equipment- and weather-related factors determines the potential for spray drift. The applicator is responsible for considering all of these factors when making decisions.

The following drift management requirements must be followed to avoid off-target movement from aerial applications to agricultural crops. These requirements do not apply to forestry application, public health uses or to application using dry formulations.

1. The distance of the outer most nozzles on the boom must not exceed 3/4 the length of the wingspan or rotor.
2. Use the largest droplet size consistent with good pest control. Small droplets are more prone to spray drift and can be minimized by appropriate nozzle selection, by orienting nozzles away from the airstream as much as possible, and by avoiding excessive spray boom pressure.

Where states have more stringent regulations, they should be observed.

The applicator should be familiar with and take into account the information covered in the Aerial Drift Reduction Advisory below:

AERIAL DRIFT REDUCTION ADVISORY

[This section is advisory in nature and does not supersede the mandatory label requirements].

INFORMATION ON DROPLET SIZE

The most effective way to reduce drift potential is to apply **MEDIUM** droplets. The best drift management strategy is to apply the largest droplets that provide sufficient coverage and control.

Applying larger droplets reduces drift potential, but will not prevent drift if applications are made improperly, or under unfavorable environmental conditions (See Wind, Temperature and Humidity, and Temperature Inversions).

CONTROLLING DROPLET SIZE

Volume – Use high flow rate nozzles to apply the highest practical spray volume. Nozzles with higher rated flows produce larger droplets.

Pressure – Do not exceed the nozzle manufacturer's recommended pressures. For many nozzle types lower pressure produces larger droplets. When higher flow rates are needed, use higher flow rate nozzles instead of increasing pressure.

Number of Nozzles – Use the minimum number of nozzles that provide uniform coverage.

Nozzle Orientation – Small droplets are more prone to spray drift and can be minimized by several factors including orienting nozzles away from the airstream. Orienting nozzles so that the spray is

released parallel to the airstream produces larger droplets than other orientations. Significant deflection from horizontal will reduce droplet size and increase drift potential.

Nozzle Type – Use a nozzle type that is designed for the intended application. With most nozzle types, narrower spray angles produce larger droplets. Consider using low-drift nozzles. Solid stream nozzles oriented straight back produce the largest droplets and the lowest drift.

BOOM LENGTH

For some use patterns, reducing the effective boom length to less than 3/4 of the wingspan or rotor length may further reduce drift without reducing swath width.

APPLICATION HEIGHT

Making applications at the lowest height that is safe reduces exposure of droplets to evaporation and wind. Applications should not be made at a height greater than 10 feet above the top of the target plants unless a greater height is required for aircraft safety.

SWATH ADJUSTMENT

When applications are made with a crosswind, the swath will be displaced downwind. Therefore, on the up and downwind edges of the field, the applicator should compensate for this displacement by adjusting the path of the aircraft upwind. Swath adjustment distance should increase, with increasing drift potential (higher wind, smaller drops, etc.).

WIND

Drift potential is lowest between wind speeds of 2 – 10 mph. However, many factors, including droplet size and equipment type determine drift potential at any given speed. Application should be avoided below 2 mph due to variable wind direction and high inversion potential. Avoid application above 10 mph due to possibility of drift. **IMPORTANT:** Local terrain can influence wind patterns. Every applicator should be familiar with local wind patterns and how they affect spray drift.

TEMPERATURE AND HUMIDITY

When making applications in low relative humidity, set up equipment to produce larger droplets to compensate for evaporation. Droplet evaporation is most severe when conditions are both hot and dry.

TEMPERATURE INVERSIONS

Applications should not occur during a temperature inversion because drift potential is high. Temperature inversions restrict vertical air mixing, which causes small suspended droplets to remain in a concentrated cloud. This cloud can move in unpredictable directions due to the light variable winds common during inversions. Temperature inversions are characterized by increasing temperatures with altitude and are common on nights with limited cloud cover and light to no wind. They begin to form as the sun sets and often continue into the morning. Their presence can be indicated by ground fog; however, if fog is not present, inversions can also be identified by the movement of smoke from a ground source or an aircraft smoke generator. Smoke that layers and moves laterally in a concentrated cloud (under low wind conditions) indicates an inversion, while smoke that moves upward and rapidly dissipates indicates good vertical air mixing.

SENSITIVE AREAS

The pesticide should only be applied when the potential for drift to adjacent sensitive areas (e.g. residential areas, bodies of water, known habitat for threatened or endangered species, non-target crops) is minimal (e.g. when wind is blowing away from the sensitive areas). Do not cultivate or plant crops within 10 feet of aquatic areas as to allow growth of a vegetative filter strip.

DIRECTIONS FOR CHEMIGATION

Instructions

For chemigation use only on cranberries and on potatoes after foliage has emerged and only through overhead sprinkler irrigation systems.

Apply this product only through overhead sprinkler irrigation systems including center pivot, lateral move, side (wheel) roll, solid set, or hand move irrigation systems after potato foliage has emerged. Do not apply this product through any other type of irrigation system. Crop injury, lack of effectiveness, or illegal pesticide residues in the crop can result from non-uniform distribution of treated water. If you have questions about calibration, you should contact State Extension Service specialists, equipment manufacturers or other experts. A person knowledgeable of the chemigation system and responsible for its operation or under the supervision of the responsible person, shall shut the system down and make necessary adjustments should the need arise.

The overhead sprinkler chemigation system must contain a functional check valve, vacuum relief valve, and low pressure drain appropriately located on the irrigation pipeline to prevent water source contamination from back flow. The pesticide injection pipeline must contain a functional, automatic, quick-closing check valve to prevent the flow of fluid back toward the injection pump. The pesticide injection pipeline must also contain a functional, normally-closed, solenoid-operated valve located on the intake side of the injection pump and connected to the system interlock to prevent fluid from being withdrawn from the supply tank when the irrigation system is either automatically or manually shut down.

The system must contain functional interlocking controls to automatically shut off the pesticide injection pump when the water pump motor stops. The irrigation line or water pump must include a functional pressure switch which will stop the water pump motor when the water pressure decreases to the point where pesticide distribution is adversely affected. Systems must use a metering pump, such as a positive displacement injection pump (e.g., diaphragm pump) effectively designed and constructed for materials that are compatible with pesticides and capable of being fitted with a system interlock.

Do not connect an irrigation system (including greenhouse systems) used for pesticide application to a public water system unless the pesticide label-prescribed safety devices for public water systems are in place. Public water system means a system for the provision to the public of piped water for human consumption if such system has at least 15 service connections or regularly serves an average of at least 25 individuals daily at least 60 days out of the year. Chemigation systems connected to public water systems must contain a functional, reduced-pressure zone, back flow preventer (RPZ) or the functional equivalent in the water supply line upstream from the point of pesticide introduction. As an option to the RPZ, the water from the public water system should be discharged into a reservoir tank prior to pesticide introduction. There shall be a complete physical break (air gap) between the flow outlet end of the fill pipe and the top or overflow rim of the reservoir tank of at least twice the inside diameter of the fill pipe.

The pesticide injection pipeline must contain a functional, automatic, quick-closing check valve to prevent the flow of fluid back toward the injection. The pesticide injection pipeline must contain a functional, normally closed, solenoid-operated valve located on the intake side of the injection pump and connected to the system interlock to prevent fluid from being withdrawn from the supply tank when the irrigation system is either automatically or manually shut down. The system must contain functional interlocking controls to automatically shut off the pesticide injection pump when the water pump motor stops or, in cases where there is no water pump, when the water pressure decreases to the point where pesticide distribution is adversely affected. Systems must use a metering pump, such as a positive displacement injection pump (e.g., diaphragm pump) effectively designed and constructed of materials that are compatible with pesticides and capable of being fitted with a system interlock.

Do not apply when wind speed favors drift beyond the area intended for treatment.

Application Instructions

Follow instructions for system requirements in the Direction for Chemigation section above. This product is only to be applied through systems with anti-siphon valves, check valves, and interlocking controls between the metering device and the water pump to guarantee synchronized shut-off. Such systems are designed and intended to prevent water source contamination or overflow of the mix tank. Be sure to maintain constant agitation in the solution tank before and during the application to assure an even suspension. Better accuracy in calibration and distribution is achieved by injecting a greater volume of a

more dilute suspension per unit time. Efficacy may be reduced if this product is applied using more than the specified volume of irrigation water per acre. Do not apply when wind speed favors drift beyond the area intended for treatment. Do not apply when the irrigation system has leaky fittings or connections, when spray nozzles cannot provide even distribution, or when irrigation lines used in applying the product have to be dismantled and drained instead of flushed. In a center pivot system, prevent spray application at the pivot unit by blocking the adjacent nozzle set. Due to their non-uniform distribution, end guns should not be used when chemigating. Improper insect control may result where sprinkler distribution patterns are not sufficiently overlapping. Upon completion of the treatment, continue to run irrigation water until all the remaining pesticide has been cleared through the lines. This product may be applied in combination with liquid fertilizers which are chemically neutral. Avoid applying this product in combination with highly alkaline fertilizers (e.g., aqueous ammonia) as this can cause this product to degrade resulting in decreased efficacy.

Spray Preparation

Prior to application, flush the injector system and chemical tank with clean water until thoroughly cleaned including removal of scale, pesticide residues, and other foreign matter. Use a mix tank to prepare a solution of this product. Fill the tank with $\frac{1}{2}$ or $\frac{3}{4}$ the total amount of water to be used. Start agitation and slowly add the required amount of this product followed by the remaining volume of water.

Sprinkler Irrigation

Follow instructions for system requirements in the Directions for Chemigation section above. Set sprinkler systems such that maximum water delivery is 0.2 inch per acre. Higher volumes of water may reduce product performance. Begin sprinkler and then evenly inject the solution into the irrigation water line to distribute the preferred rate per acre. To obtain satisfactory mixing, inject this product using a positive displacement pump into the main line before a right angle turn. Optimal insecticidal activity is achieved only when this product is retained on foliage. Do not apply when wind speed favors drift beyond the area intended for treatment. Improper insect control may result where sprinkler distribution patterns are not sufficiently overlapping.

DIRECTIONS FOR AERIAL OR GROUND SPRAY APPLICATION

APPLICATION TIMING

Begin application when treatment thresholds for insect populations are reached. Additional information about recognized economic threshold levels may be obtained from the Cooperative Extension Service, professional consultants, or other qualified authorities.

INFORMATION

This product is intended to control sucking and chewing insects for the listed crops on this label. Acetamiprid, the active ingredient in this product, is a neonicotinoid insecticide which acts through contact and ingestion to control target insects. This product rapidly absorbs into the plant tissue and immediately moves via systemic translaminar activity, providing protection to the entire leaf. However, for optimal control, thorough spray coverage is essential. After this product's spray solution has dried, it remains effective following rain or irrigation (rainfast).

MIXING INSTRUCTIONS

Mixing and Application Instructions for HM-1570 Insecticide

This product readily dissolves in water to form a spray mixture, to be applied via ground or air.

1. Prepare only the amount of spray mixture needed for that day's application.
2. Fill the tank $\frac{1}{4}$ - $\frac{1}{2}$ full with the total amount of water to be used.
3. Start agitation in the tank and add the required amount of this product. Shake the jug to fluff the product prior to measuring. Refrain from tamping down the product when using the measuring cone because the cone is calibrated to the fluffed product.
4. Direct a stream of water onto any floating product as the tank is being filled to assist in mixing.
5. Mix in tank for 2 minutes or until a thorough mixture is achieved prior to applying.

6. Be sure to maintain constant agitation in the solution tank before and during the application to assure an even suspension. Agitate the mixture before use for 10 minutes if the solution sits stationary for an extended period of time.
7. Equip the spray system with a 50-mesh inline filter. This will protect typically-used nozzles. Spray nozzles may also be equipped with nozzle filters (50-mesh) or slotted nozzle filters (25- to 50-mesh equivalent).
8. This product is unstable in water with a low pH (below 4) or high pH (above 9). Buffer water to attain an optimal pH range, if necessary.

COMPATIBILITY/TANK MIXING

This product is compatible with a variety of common spray products, when diluted with equal parts water. However, all potential compatibilities based on local considerations are unknown. To ensure the compatibility of this product with other spray products, conduct a jar test prior to tank mixing. Conduct a jar test with equal parts water and this product and mix thoroughly with added spray product or other pesticide. **USE SPRAY MIXTURES DIRECTLY AFTER MIXING WITH SUFFICIENT AGITATION. MIXTURES THAT CURDLE, GREASE, OR PRECIPITATE ARE NOT TO BE USED.**

It is the pesticide user's responsibility to ensure that all products are registered for the intended use. Read and follow the applicable restrictions and limitations and directions for use on all product labels involved in tank mixing. Users must follow the most restrictive directions for use and precautionary statements of each product in the tank mixture.

Special Instructions for Tank Mixing HM-1570 Insecticide

When tank mixing this product with other products, add them in the following sequence:

- (1) Water soluble packets
- (2) Wettable powders (e.g., HM-1570 Insecticide Insecticide)
- (3) Water dispersible granules
- (4) Flowing liquids
- (5) Emulsifiable concentrates
- (6) Adjuvants and/or oils (do not use stickers)

Following the addition of each product above, be sure to let full dispersion occur before adding the next product in the sequence. Boron containing products will negatively affect the film solubility of water soluble packets. Therefore, if boron products are to be added to the spray tank mix add the soluble packets first and wait until they are dissolved before adding any boron products.

APPLICATION INSTRUCTIONS

ROW CROPS

Unless otherwise specified in the crop specific directions, apply this product by air at a minimum finished spray volume of 5 gallons per acre or by ground at a minimum finished spray volume of 15 gallons per acre. It is important that equipment be calibrated and adjusted so as to create uniform and thorough spray coverage of the crop. Use nozzle and pressure combinations that distribute MEDIUM spray droplets (see nozzle manufacturer's catalogs and ASAE Standard S-572) when applying this product by air.

To increase plant uptake, spray coverage, and enhance pest control, use with a spray adjuvant, especially in listed vegetable crops (except legumes) and cotton (when controlling whiteflies). Recommended spray adjuvants include high quality non-ionic surfactants, methylated seed oils, or silicone surfactants. Not all adjuvants are safe for the target crop and must be chosen carefully to avoid adverse effects such as burn to foliage or fruit or spotting. See crop specific directions for adjuvant addition recommendations and refer to adjuvant directions for use. Additional information may be obtained from your local Crop Advisor, Extension Service representative, or a representative from Helena Chemical Company. For dense foliage or heavy infestations, use the higher listed rates. Do not add a sticker in the spray mixture. Specific residual control length depends on many factors including level of insect infestation, dosage rate, plant growth, and environmental factors. If applying through foliar banded application, the amount of product per acre is determined by band width divided by row width then multiplied by the appropriate broadcast rate.

When spraying is completed, rinse sprayer with clean water and dispose of the rinsate by applying to an area that has already been treated or dispose of according to the STORAGE AND DISPOSAL section.

ORCHARD CROPS

For optimal pest control, it is important that equipment be calibrated and adjusted so as to create uniform and thorough crop coverage. To achieve thorough coverage throughout the tree or vine canopy, it is important to choose an appropriate finished spray volume for the size of the tree or vine. See crop specific directions for particular pests. Use nozzle and pressure combinations that distribute MEDIUM spray droplets (see nozzle manufacturer's catalogs and ASAE Standard S-572) when applying this product by air. Coverage by aerial applications may not be as thorough as ground applications.

To increase plant uptake, spray coverage, and enhance pest control, use this product with a spray adjuvant, especially in pome fruit (when controlling codling moth, oriental fruit moth, and San Jose scale). Recommended spray adjuvants include high quality non-ionic surfactants, methylated seed oils, or horticultural oils. Not all adjuvants are safe for the target crop and must be chosen carefully to avoid adverse effects such as burn to foliage or fruit or spotting. See crop specific directions for adjuvant addition recommendations and refer to adjuvant directions for use. Do not add a sticker in the spray mixture. Additional information may be obtained from your local Crop Advisor, Extension Service representative, or a representative from Helena Chemical Company.

For dense foliage or heavy infestations, use the higher listed rates. Specific residual control length depends on many factors including level of insect infestation, dosage rate, plant growth, and environmental factors.

When spraying is completed, rinse sprayer with clean water and dispose of the rinsate by applying to an area that has already been treated or dispose of according to the STORAGE AND DISPOSAL section.

INTEGRATED PEST MANAGEMENT (IPM) USE OF THIS PRODUCT

This product can offer substantial benefits to producers using IPM programs. This product has adulticidal, larvicidal, and ovicidal activity against many pests. This product can be effectively utilized in IPM programs to control important pests combined with maintenance of beneficial insects and spiders.

RESISTANCE MANAGEMENT

This product has acetamiprid as its active ingredient and is a Group 4A neonicotinoid, a class of insecticides. Resistance can develop if products that have the same mode of action are applied repeatedly. Use this product following resistance management procedures in your area. The local resistance management practices and strategies of your agricultural advisor, extension personnel, university, or professional crop advisor should be consulted in order to minimize the likelihood of resistance development in pests. These strategies may include limiting the number of consecutive applications of this product to two before rotating applications with insecticides that have different modes of action. Avoid foliar application of this product on crops treated with a Group 4A insecticide seed treatment or soil-applied application if a non-Group 4A insecticide has not been applied between these applications. Avoid applications below the minimum rate listed for each crop/pest combination as this can enhance resistance development. For best results, your pest management system should use the practices recommended for IPM.

Do NOT apply this product to labeled crops if grown in a greenhouse in order to prevent the development of insect resistance.

CROP USE DIRECTIONS

ASPARAGUS

Apply this product by air at a minimum finished spray volume of 5 gallons per acre or by ground at a minimum finished spray volume of 20 gallons per acre. For optimal control, through spray coverage is essential.

CROP SPECIFIC INSTRUCTIONS

PEST	PRODUCT APPLICATION RATE Fl. Oz. (Lbs. a.i.)/Acre	USE INSTRUCTIONS
Asparagus Thrips, Japanese Beetle, Tarnished Plant Bug, Asparagus Miner (suppression)	4.3 fl. oz. (0.10 lbs. a.i.)	For control of Japanese Beetle and Tarnished Plant Bug, make foliar applications following the cutting season. For control of Asparagus Miner, make applications to adults prior to egg laying.
Leafhoppers	2.1 – 3.2 fl. oz. (0.05 - 0.075 lbs. a.i.)	
Asparagus Aphids, Asparagus Beetle, Spotted Asparagus Beetle	2.1 – 4.3 fl. oz. (0.05 - 0.10 lbs. a.i.)	For Asparagus Aphids, make applications to new and young plantings. For control of Asparagus Beetle and Spotted Asparagus Beetle, take samples early and continue sampling regularly throughout the season.
USE RESTRICTIONS <ul style="list-style-type: none"> • Maximum applications: 2 per calendar year. • Do NOT apply more than once every 10 days. • Pre-Harvest Interval (PHI) = 1 day • Do NOT apply more than 8.6 fl. oz. (0.2 lbs. a.i.) per acre per calendar year regardless of application method. • Use a non-ionic surfactant 		

BLUEBERRIES AND OTHER BUSH and CANEBERRIES (Within Crop Sub-Groups 13-07A and B) - Aronia Berry; Blackberry; Blueberry, highbush and lowbush; Buffalo Currant; Chilean Guava; Currant, red and black; Elderberry; European Barberry; Gooseberry; Cranberry, Highbush; Honeysuckle, edible; Huckleberry; Jostaberry; Juneberry; Lingonberry; Loganberry; Native Currant; Raspberry, black and red; Salal; Sea Buckthorn; Wild Raspberry; and cultivars, varieties and/or hybrids of these

Apply this product by air at a minimum finished spray volume of 5 gallons per acre or by ground at a minimum finished spray volume of 20 gallons per acre. For optimal pest control, thorough crop coverage is essential. Use the higher rate in the range when you are unsure of the susceptibility of the aphid or thrips species or when the aphid or thrips species is unknown.

CROP SPECIFIC INSTRUCTIONS

PEST	PRODUCT APPLICATION RATE Fl. Oz. (Lbs. a.i.)/Acre	USE INSTRUCTIONS
Aphids, Leafhoppers	1.9 – 4.3 fl. oz. (0.044 - 0.10 lbs. a.i.)	Use the higher rate in the range when you are unsure of the susceptibility of the aphid species or when the aphid species is unknown.
Whitefly	3.2 – 4.3 fl. oz. (0.075 - 0.10 lbs. a.i.)	
Japanese Beetle, Blueberry Maggot, Sap Beetles, Tarnished Plant Bug, Strawberry Rootworm, Cherry Fruitworm, Cranberry Fruitworm, Flea Beetle, Spanworm, Thrips, Blueberry Gall Midge, Western Raspberry Fruit Worm (adult)	3.6 – 4.3 fl. oz. (0.085 - 0.10 lbs. a.i.)	Use the higher rate in the range when you are unsure of the susceptibility of the thrips species or when the thrips species is unknown.
<p>USE RESTRICTIONS</p> <ul style="list-style-type: none"> • Maximum applications: 5 per calendar year. • Do NOT apply more than once every 7 days. • Pre-Harvest Interval (PHI) = 1 day • Do NOT apply more than 21.4 fl. oz. (0.5 Lbs. a.i.) per acre per calendar year regardless of application method. 		

CITRUS (Within Crop Group 10-10) - Calamondin; Citron; Citrus Hybrids; Grapefruit; Japanese Summer Grapefruit; Kumquat; Lemon; Lime; Lime, Australian Desert; Lime, Australian Finger; Lime, Australian Round; Lime, Brown River Finger; Lime, Mount White; Lime, Russell River; Lime, Sweet; Lime, Tahiti; Lime, New Guinea Wild; Mandarin, Mediterranean; Mandarin, Satsuma; Orange, Sour; Orange, Sweet; Orange, Tachibana; Orange, Trifoliolate; Pummelo; Tangelo; Tangor; Uniq Fruit; and cultivars, varieties and/or hybrids of these

Apply this product to mature trees by air at a minimum finished spray volume of 20 gallons per acre or by ground at a minimum finished spray volume of 100 gallons per acre. For optimal pest control, use ground applications; thorough crop coverage is essential. Use the higher rate in the range when crop is under heavy pressure.

CROP SPECIFIC INSTRUCTIONS

PEST	PRODUCT APPLICATION RATE Fl. Oz. (Lbs. a.i.)/Acre	USE INSTRUCTIONS
Aphids	2.1 – 4.3 fl. oz. (0.05 - 0.10 lbs. a.i.)	Use the higher rate in the range when you are unsure of the susceptibility of the aphid species or when the aphid species is unknown.
Citrus Thrips, Citrus Leafminer, Citrus Mealybug, Caribbean Black Scale, Glassywinged Sharpshooter	3.2 – 5.4 fl. oz. (0.075 - 0.125 lbs. a.i.)	Use the higher rate in the range when crop is under heavy pest pressure.
Citricola Scale, Red Scale	6.4 – 10.7 fl. oz. (0.15 - 0.25 lbs. a.i.)	Treat Citricola Scale in the spring and fall when crawlers are present. Addition of an approved horticultural oil will improve control. For scale on foliage and wood, adjust gallonage based on tree size. 750 to 1,500 gallons per acre is the optimal volume for Red Scale control.
Katydid	4.7 – 8.1 fl. oz. (0.11 - 0.19 lbs. a.i.)	Apply when Katydid first appear or at petal fall. Make a repeat application in 2 to 3 weeks.
Asian Citrus Psyllid	5.6 – 10.7 fl. oz. (0.13 - 0.25 lbs. a.i.)	Apply when pests first appear. Add a silicone-based adjuvant or horticultural oil to improve spray coverage and control. Scout groves regularly. Retreat as necessary but do not exceed the maximum application rate per acre per calendar year.
<p>USE RESTRICTIONS</p> <ul style="list-style-type: none"> • Maximum applications: 5 per calendar year. • Do NOT apply more than once every 7 days. • Pre-Harvest Interval (PHI) = 7 days • Do NOT apply more than 23.6 fl. oz. (0.55 lbs. a.i.) per acre per calendar year regardless of application method. 		

CLOVER

For use only in Idaho, Oregon, and Washington

Apply this product by air at a minimum finished spray volume of 5 gallons per acre or by ground at a minimum finished spray volume of 20 gallons per acre. For optimal pest control thorough crop coverage is essential. Use the higher rate in the range when crop is under heavy pressure.

CROP SPECIFIC INSTRUCTIONS

PEST	PRODUCT APPLICATION RATE Fl. Oz. (Lbs. a.i.)/Acre
Aphids, including Clover and Pea Aphid	2.1 – 3.2 fl. oz. (0.05 - 0.075 lbs. a.i.).
USE RESTRICTIONS <ul style="list-style-type: none">• For use only in Idaho, Oregon, and Washington.• Do NOT apply more than once per acre per calendar year regardless of application method.• Pre-Harvest Interval (PHI) = 30 days• Do NOT apply more than 3.2 fl. oz (0.075 lbs. a.i.) per acre per calendar year.	

COTTON

HM-1570 Insecticide should be applied in a minimum finished spray volume of 2 gallons per acre by aircraft and 5 gallons per acre by ground equipment. Under extreme pest populations or dense foliage, use a minimum spray volume of 5 gallons per acre by air and a minimum spray volume of 10 gallons per acre by ground. Use of a high quality adjuvant, such as methylated seed oil (MSO) for ground applications and crop oil concentrate (COC) for aerial applications is recommended. Use only adjuvant products labeled for agricultural use and follow the directions on the manufacturer's label.

For optimal pest control, thorough crop coverage is essential. If under heavy pressure by any of the pests listed below, use the high rate listed in the range.

CROP SPECIFIC INSTRUCTIONS

PEST	PRODUCT APPLICATION RATE Fl. Oz. (Lbs. a.i.)/Acre	USE INSTRUCTIONS
Aphids	1.1 – 2.1 fl. oz. (0.025 - 0.05 lbs. a.i.)	<p>Use the higher rate in the range when you are unsure of the susceptibility of the aphid species or when the aphid species is unknown.</p> <p>Foliar absorption can be affected after cutout which could affect aphid control. For best results after cutout, use a penetrating adjuvant (including oils) to increase contact or absorption and/or tank mix with a knockdown insecticide like Bifenture™ or Acephate.</p> <p>Begin applications when treatment thresholds have been reached.</p> <p>Thorough coverage is important to obtain optimum control.</p>
Whitefly, Sweet Potato and Silver Leaf	3.2 – 4.3 fl. oz. (0.075 - 0.10 lbs. a.i.)	<p>Make applications when adult whiteflies first appear and before the development of nymphs.</p> <p>Apply prior to the establishment of heavy infestation. As long as pest infestation continues, make repeat applications 7 days apart however do not apply more than 17.1 fluid ounces (0.4 Lbs. a.i.) per acre per calendar year of this product nor exceed 4 applications per calendar year.</p> <p>Apply by air using a minimum of 5 gallons of water per acre, or by ground using a minimum of 15 gallons of water per acre.</p> <p>The tendency for resistance development in whiteflies has been observed. To reduce the potential for resistance, rotate applications of</p>

		<p>this product with insecticides that have a different mode of action.</p> <p>Foliar absorption may be affected after cutout which could affect whitefly control. For best results after cutout, use a penetrating adjuvant (including oils) to increase contact or absorption and/or tank mix with a knockdown insecticide like Bifenture™ or Acephate.</p>
Plantbugs (<i>Lygus</i> spp.)	2.1 – 4.3 fl. oz. (0.05 - 0.10 lbs. a.i.)	<p>Applications of this product may only achieve Plantbug suppression as species vary in susceptibility to this product. Achieving control may require that two applications be made 7 - 10 days apart.</p> <p>Begin applications when treatment thresholds have been reached. Thorough coverage is important to obtain optimum control.</p>
Fleahopper	1.1 – 2.1 fl. oz. (0.025 - 0.05 lbs. a.i.)	<p>Begin applications when treatment thresholds have been reached. Thorough coverage is important to obtain optimum control.</p>
Thrips	2.1 – 3.2 fl. oz. (0.05 - 0.075 lbs. a.i.)	<p>Apply when damage by thrips is first noticed or expected.</p> <p>Begin applications when treatment thresholds have been reached. Spray coverage and control may be improved with the addition of a surfactant.</p>
FOR USE AS AN OVICIDE		
Budworm, Bollworm	1.1 – 2.1 fl. ounces (0.025 - 0.05 lbs. a.i.)	<p>Apply within 24 hours of egg lay.</p> <p>Thorough coverage is important to obtain optimum control.</p>
Whitefly	3.2 – 4.3 fl. oz. (0.075 - 0.10 lbs. a.i.)	<p>Sustained control of migrating adult whiteflies will not be achieved when making applications for ovicidal control.</p>
<p>USE RESTRICTIONS</p> <ul style="list-style-type: none"> • Do NOT apply this product more than 4 times per acre per calendar year regardless of application method. • Do NOT apply more than once every 7 days. • Pre-Harvest Interval (PHI) = 28 days • Do NOT apply more than 17.1 ounces (0.4 Lbs. a.i.) per acre per calendar year regardless of application method. • There are no rotational crop plantback restrictions for this product. 		

CUCURBITS (Within Crop Group 9) - Chayote (fruit); Chinese Waxgourd (Chinese preserving melon); Citron Melon; Cucumber; Gherkin; Gourd, edible; *Momordica* spp.; Muskmelon (hybrids and/or cultivars of *Cucumis melo* including True Cantaloupe, Cantaloupe, Casaba, Crenshaw melon, Golden Pershaw Melon, Honeydew Melon, Honey Balls, Mango Melon, Persian Melon, Pineapple Melon, Santa Claus Melon, and Snake Melon); Pumpkin; Squash, summer and winter; Watermelon

Apply this product by air at a minimum finished spray volume of 5 gallons per acre or by ground at a minimum finished spray volume of 20 gallons per acre. For optimal pest control thorough crop coverage is essential. If under heavy pressure by any of the pests listed below, use the high rate listed in the range.

CROP SPECIFIC INSTRUCTIONS

PEST	PRODUCT APPLICATION RATE Fl. Oz. (Lbs. a.i.)/Acre	USE INSTRUCTIONS
Cucumber Beetle (Spotted, Striped, and Western Striped), Melonworm, Pickleworm	2.1 – 4.3 fl. oz. (0.05 - 0.10 lbs. a.i.)	After application to Cucumber Beetle, adult beetles will stop feeding and death will follow within a few days. For applications to control Melonworm, make applications when foliar feeding is first noticed or when larvae are observed in the field. For applications to control Pickleworm, make applications at first bloom. Make additional applications as needed. Add a spray adjuvant, like a silicone-based surfactant or horticultural oil to improve spray coverage and control.
Squash Bug, Squash Vine Borer	4.3 fl. oz. (0.10 lbs. a.i.)	For optimal control of Squash Bug, make applications to newly laid eggs and nymphs.
Aphids, Leafhoppers	2.1 – 3.2 fl. oz. (0.05 - 0.075 lbs. a.i.)	Use the higher rate in the range when you are unsure of the susceptibility of the aphid or leafhopper species or when the aphid species is unknown.
Whitefly, Sweet Potato and Silver Leaf	2.1 – 4.3 fl. oz. (0.05 - 0.10 lbs. a.i.)	Apply when adult whiteflies first appear and before the development of nymphs. Apply prior to the establishment of heavy infestation. As long as pest infestation continues, make repeat applications 5-7 days apart however do not apply more than 21.4 fluid ounces (0.5 Lbs. a.i.) per acre per calendar

		<p>year of this product nor exceed 5 applications per calendar year. Add an adjuvant to improve spray coverage and control. The tendency for resistance development in whiteflies has been observed. To reduce the potential for resistance, rotate applications of this product with insecticides that have a different mode of action.</p>
<p>USE RESTRICTIONS</p> <ul style="list-style-type: none"> • Maximum applications: 5 per calendar year. • Do NOT apply more than once every 5 days. • The maximum pre-transplant application rate is 0.15 pound acetamiprid per acre. • Pre-Harvest Interval (PHI) = 0 days (may be applied same day as harvest) • Do NOT apply more than 21.4 fl. oz. (0.5 lbs. a.i.) per acre per calendar year regardless of application method including pre-transplant applications. 		

EDIBLE PODDED LEGUME VEGETABLES (within Crop Sub-Group 6A) and SUCCULENT SHELLED PEAS AND BEANS (Within Crop Sub-Group 6B) - Bean (*Phaseolus* spp.), includes Lima Bean (Green), Runner Bean, Snap Bean, Wax Bean; Bean (*Vigna* spp.), includes Asparagus Bean, Blackeyed Pea, Chinese Longbean, Cowpea, Moth Bean, Southern Pea, Yardlong Bean; Broad Bean (succulent); Jackbean; Pea (*Pisum* spp.), includes Dwarf Pea, Edible-Pod Pea, English Pea, Garden Pea, Green Pea, Snow Pea, Sugar Snap Pea; Pigeon Pea; Soybean (immature seed); Sword Bean

Apply this product by air at a minimum finished spray volume of 5 gallons per acre or by ground at a minimum finished spray volume of 20 gallons per acre. For optimal pest control, thorough crop coverage is essential.

Use the higher rate in the range when you are unsure of the susceptibility of the aphid or thrips species or when the aphid or thrips species is unknown.

CROP SPECIFIC INSTRUCTIONS

PEST	PRODUCT APPLICATION RATE Fl. Oz. (Lbs. a.i.)/Acre
Aphids, Leafhoppers, Cucumber Beetles, Bean Leaf Beetle, Mexican Bean Beetle	1.7 – 4.3 fl. oz. (0.044-0.10 lbs. a.i.)
Whitefly	3.2 – 4.3 fl. oz. (0.075 - 0.10 lbs. a.i.)
Thrips	3.6 – 4.3 fl. oz. (0.085 - 0.10 lbs. a.i.)
<p>USE RESTRICTIONS</p> <ul style="list-style-type: none"> • Maximum applications: 3 per calendar year. • Do NOT apply more than once every 7 days. • Pre-Harvest Interval (PHI) = 7 days • Do NOT apply more than 12.8 fl. oz. (0.3 lbs. a.i.) per acre per calendar year regardless of application method. 	

FRUITING VEGETABLES (Within Crop Group 8-10) – African Eggplant; Bush Tomato; Cocona; Currant Tomato; Eggplant; Garden Huckleberry; Goji Berry; Groundcherry; Martynia; Naranjilla; Okra; Pea Eggplant; Pepino; Pepper, bell; Pepper, nonbell; Roselle; Scarlet Eggplant; Sunberry; Tomatillo; Tomato; Tree Tomato; and cultivars/hybrids of these

Apply this product by air at a minimum finished spray volume of 5 gallons per acre or by ground at a minimum finished spray volume of 20 gallons per acre. For optimal pest control thorough crop coverage is essential. Use the higher rate in the range when you are unsure of the susceptibility of the aphid or thrips species or when the aphid or thrips species is unknown. If under heavy pressure by any of the pests listed below, use the high rate listed in the range.

CROP SPECIFIC INSTRUCTIONS

PEST	PRODUCT APPLICATION RATE Fl. Oz. (Lbs. a.i.)/Acre	USE INSTRUCTIONS
Aphids	1.5 – 3.2 fl. oz. (0.035 - 0.075 lbs. a.i.)	Apply when aphid treatment thresholds are reached.
Colorado Potato Beetle	1.1 – 2.1 fl. oz. (0.025 - 0.05 lbs. a.i.)	
Whitefly; Sweet Potato, Silver Leaf, and Greenhouse (field use only)	2.1 – 3.2 fl. oz. (0.05 - 0.075 lbs. a.i.)	Apply when adult whiteflies first appear and before the development of nymphs. Apply prior to the establishment of heavy infestation. As long as pest infestation continues, make repeat applications 7 days apart however do not apply more than 12.8 fluid ounces (0.3 Lbs. a.i.) per acre per calendar year of this product nor exceed 4 applications per calendar year. Add an adjuvant to improve spray coverage and control. The tendency for resistance development in whiteflies has been observed. To reduce the potential for resistance, rotate applications of this product with insecticides that have a different mode of action.
Pepper Weevil	2.1 – 3.2 fl. oz. (0.05 - 0.075 lbs. a.i.)	Start applications when adult Pepper Weevils first appear and at the same time that flower buds and/or fruit are present. Make repeat applications on 7 to 14 day intervals however do not apply more than 12.8 fluid ounces (0.3 Lbs. a.i.) per acre per calendar year of this product nor exceed 4 applications per calendar year. If crop is under heavy infestation, make repeat

		applications at the 7-day interval.
Thrips	3.2 fl. oz. (0.075 lbs. a.i.)	Apply when thrips first appear. Make repeat applications as needed however do not apply more than 12.8 fluid ounces (0.3 Lbs. a.i.) per acre per calendar year of this product nor exceed 4 applications per calendar year. To reduce the potential for resistance, rotate applications of this product with insecticides that have a different mode of action.
USE RESTRICTIONS <ul style="list-style-type: none"> • Maximum applications: 4 per calendar year. • Do NOT apply more than once every 7 days. • The maximum pre-transplant application rate is 0.15 pound acetamiprid per acre. • Pre-Harvest Interval (PHI) = 7 days • Do NOT apply more than 12.8 fl. oz. (0.3 lbs. a.i.) per acre per calendar year regardless of application method including pre-transplant applications. 		

SMALL FRUIT CLIMBING SUB-GROUP (except Fuzzy Kiwifruit) (Within Crop Sub-Group 13-07F) – Amur River Grape; Gooseberry; Kiwifruit, hardy; Maypop; Schisandra Berry; and cultivars, varieties and/or hybrids of these

Apply this product by air at a minimum finished spray volume of 5 gallons per acre or by ground at a minimum finished spray volume of 20 gallons per acre. For optimal pest control, thorough crop coverage is essential; use ground applications.

CROP SPECIFIC INSTRUCTIONS

PEST	PRODUCT APPLICATION RATE Fl. Oz. (Lbs. a.i.)/Acre	USE INSTRUCTIONS
Aphids, Glassywinged Sharpshooter, Grape Berry Moth, Grape Cane Girdler, Leafhoppers (including grape leafhopper and variegated leafhopper), Mealybug (including grape, obscure, and vine), Thrips, Western Grapeleaf Skeletonizer	2.1 – 4.3 fl. oz. (0.05 - 0.10 lbs. a.i.)	For applications to control Western Grapeleaf Skeletonizer, make applications when larvae are witnessed feeding on leaves. To achieve thorough crop spray coverage, use a sufficient volume of water.
Banded Grape Bug, Japanese Beetle, Phylloxera (aerial form only), Rose Chafer	2.1 – 4.3 fl. oz. (0.05 - 0.10 lbs. a.i.)	After application to Japanese Beetle, adult beetles will stop feeding and death will follow within a few days.

USE RESTRICTIONS

- Not for use on Banded Grape Bug, Japanese Beetle, Phylloxera (aerial form only), and Rose Chafer in CA, OR, and WA.
- Maximum applications: 2 per calendar year.
- Do NOT apply more than once every 14 days.
- Spray adjuvants are NOT to be used.
- Pre-Harvest Interval (PHI) = 3 days
- Do NOT apply more than 8.6 fl. ounces (0.2 lbs. a.i.) per acre per calendar year regardless of application method.

HEAD and STEM BRASSICA (Within Crop Sub-Group 5A) – Broccoli; Broccoli, Chinese (gai lon); Brussels Sprouts; Cabbage; Cabbage, Chinese (napa); Cabbage, Chinese Mustard (gai choy); Cauliflower; Cavalo Broccolo; Kohlrabi

Apply this product by air at a minimum finished spray volume of 5 gallons per acre or by ground at a minimum finished spray volume of 20 gallons per acre. For optimal pest control thorough crop coverage is essential. Use the higher rate in the range when crop is under heavy pressure.

CROP SPECIFIC INSTRUCTIONS

PEST	PRODUCT APPLICATION RATE Fl. Oz. (Lbs. a.i.)/Acre	USE INSTRUCTIONS
Aphids	1.5 – 3.2 fl. oz. (0.035 - 0.075 lbs. a.i.)	Use the higher rate in the range when you are unsure of the susceptibility of the aphid species or when the aphid species is unknown.
Whitefly; Sweet Potato, Silver Leaf, and Greenhouse (field use only)	2.1 – 3.2 fl. oz. (0.05 - 0.075 lbs. a.i.)	Apply when adult whiteflies first appear and before the development of nymphs. Apply prior to the establishment of heavy infestation. As long as pest infestation continues, make repeat applications 7 days apart however do not apply more than 16.1 fluid ounces (0.375 Lbs. a.i.) per acre per calendar year nor exceed 5 applications per calendar year. Add an adjuvant to improve spray coverage and control. The tendency for resistance development in whiteflies has been observed. To reduce the potential for resistance, rotate applications of this product with insecticides that have a different mode of action.
Diamondback Moth (suppression)	3.2 fl. oz. (0.075 lbs. a.i.)	Apply when moths start to lay eggs. Make repeat applications as needed however do not apply more than 16.1 fluid ounces (0.375 Lbs. a.i.) per acre per calendar year nor exceed 5 applications per calendar year. Use this product as a tool in a pest control program to manage resistance.
Thrips	3.2 fl. oz. (0.075 lbs. a.i.)	Apply when thrips first appear. Make repeat applications as needed however do not apply more than 16.1 fl. oz. (0.375 lbs. a.i.) per acre per calendar year

		<p>nor exceed 5 applications per calendar year.</p> <p>For optimal pest control, thorough crop coverage is essential as thrips will often seek the sheltered parts of plants.</p> <p>Adjust spray equipment such that a fine spray is produced for application. To prevent injury to cabbage, an application during the “cupping” stage can be useful. To reduce the potential for resistance, rotate applications of this product with insecticides that have a different mode of action.</p>
Swede Midge	3.2 fl. oz. (0.075 lbs. a.i.)	Controlling the first generation of Swede Midge in the area with a preventative spray will reduce the likelihood of population spikes later in the season.
<p>USE RESTRICTIONS</p> <ul style="list-style-type: none"> • Maximum applications: 5 per calendar year. • Do NOT apply more than once every 7 days. • The maximum pre-transplant application rate is 0.15 pound acetamiprid per acre. • Pre-Harvest Interval (PHI) = 7 days • Do NOT apply more than 16.1 fl. oz. (0.375 Lbs. a.i.) per acre per calendar year regardless of application method including pre-transplant applications. 		

LEAFY COLE CROPS (Within Crop Sub-Group 5B) and TURNIP GREENS

Broccoli Raab (rapini); Cabbage, Chinese (boy choy); Collards; Kale; Mizuna; Mustard Greens; Mustard Spinach; Rape Greens; Turnip Greens

Apply this product by air at a minimum finished spray volume of 5 gallons per acre or by ground at a minimum finished spray volume of 30 gallons per acre. For optimal pest control, thorough crop coverage is essential. Use the higher rate in the range when you are unsure of the susceptibility of the aphid species or when the aphid species is unknown. If under heavy pressure by any of the pests listed below, use the high rate listed in the range.

CROP SPECIFIC INSTRUCTIONS

PEST	PRODUCT APPLICATION RATE Fl. Oz. (Lbs. a.i.)/Acre	USE INSTRUCTIONS
Aphids	1.5 – 4.3 fl. oz. (0.035 - 0.10 lbs. a.i.)	
Whitefly; Sweet Potato, Silver Leaf, and Greenhouse (field use only)	2.1 – 4.3 fl. oz. (0.05 - 0.10 lbs. a.i.)	<p>Apply when adult whiteflies first appear and before the development of nymphs. Apply prior to the establishment of heavy infestation. As long as pest infestation continues, make repeat applications 7 days apart but do not exceed the maximum application rate per acre per calendar year. Add an adjuvant to improve spray coverage and control.</p> <p>The tendency for resistance development in whiteflies has been observed. To reduce the potential for resistance, rotate applications of this product with insecticides that have a different mode of action.</p>
Diamondback Moth (suppression), Flea Beetle	3.2 – 4.3 fl. oz. (0.075-0.10 lbs. a.i.)	Apply when moths start to lay eggs. Make repeat applications as needed but do not exceed the maximum application rate per acre per calendar year. Use this product as a tool in a pest control program to manage resistance.
Thrips	3.2 – 4.3 fl. oz. (0.075 - 0.10 lbs. a.i.)	Apply when thrips first appear. Make repeat applications as needed but do not exceed the maximum application rate per acre per calendar year. For optimal pest control, thorough crop coverage is essential as thrips will often

		<p>seek the sheltered parts of plants.</p> <p>Adjust spray equipment such that a fine spray is produced for application. To prevent injury to cabbage, an application during the "cupping" stage can be useful. To reduce the potential for resistance, rotate applications of this product with insecticides that have a different mode of action.</p>
Harlequin Bug	<p>3.2 – 4.3 fl. oz. (0.075 - 0.10 lbs. a.i.)</p>	
Swede Midge	<p>3.2 – 4.3 fl. oz. (0.075 - 0.10 lbs. a.i.)</p>	<p>Controlling the first generation of Swede Midge in the area with a preventative spray will reduce the likelihood of population spikes later in the season.</p>
<p>USE RESTRICTIONS</p> <ul style="list-style-type: none"> • Maximum applications: 4 per calendar year. • Do NOT apply more than once every 7 days. • Do NOT harvest turnip root for food or feed purposes. • The maximum pre-transplant application rate is 0.15 pound acetamiprid per acre. • Pre-Harvest Interval (PHI) = 3 days • Do NOT apply more than 16.1 fl. oz. (0.375 lbs. a.i.) per acre per calendar year regardless of application method including pre-transplant applications. • Use a non-ionic surfactant 		

LEAFY VEGETABLES (Within Crop Group 4) – Amaranth; Arugula; Cardoon; Celery; Chinese Celery; Celtuce; Chervil; Chrysanthemum, edible leaved and garland; Corn Salad; Cress, garden and upland; Dandelion; Dock; Endive; Fennel, Florence; Lettuce, head and leaf; Orach; Parsley; Purslane, garden and winter; Radicchio; Rhubarb; Spinach, leaf; Spinach, New Zealand; Spinach, vine; Swiss Chard

Apply this product by air at a minimum finished spray volume of 5 gallons per acre or by ground at a minimum finished spray volume of 20 gallons per acre. For optimal pest control, thorough crop coverage is essential. If under heavy pest pressure by any of the pests listed below, use the higher rate listed in the range.

CROP SPECIFIC INSTRUCTIONS

PEST	PRODUCT APPLICATION RATE Fl. Oz. (Lbs. a.i.)/Acre	USE INSTRUCTIONS
Aphids	1.5 – 3.2 fl. oz. (0.035 - 0.075 lbs. a.i.)	Use the higher rate in the range when you are unsure of the susceptibility of the aphid species or when an aphid species that is difficult to control is present (e.g., foxglove aphid, lettuce aphid, red aphid, etc.).
Whitefly; Sweet Potato, Silver Leaf, and Greenhouse (field use only)	2.1 – 3.2 fl. oz. (0.05 - 0.075 lbs. a.i.)	Apply when adult whiteflies first appear and before the development of nymphs. Apply prior to the establishment of heavy infestation. As long as pest infestation continues, make repeat applications 7 days apart but do not apply more than 16.1 fluid ounces (0.375 Lbs. a.i.) per acre per calendar year of this product nor exceed a total of 5 applications per calendar year. Add an adjuvant to improve spray coverage and control. The tendency for resistance development in whiteflies has been observed. To reduce the potential for resistance, rotate applications of this product with insecticides that have a different mode of action.

USE RESTRICTIONS

- Maximum applications: 5 per calendar year.
- Do NOT apply more than once every 7 days.
- The maximum pre-transplant application rate is 0.15 pound acetamiprid per acre.
- Pre-Harvest Interval (PHI) = 7 days
- Do NOT apply more than 16.1 fl. oz. (0.375 lbs. a.i.) per acre per calendar year regardless of application method including pre-transplant applications.

BULB VEGETABLES (Within Crop Group 3-07) – Such as: Chives, fresh leaves; Chives, Chinese, fresh leaves; Daylily, bulbs; Elegans Hosta; Fritillaria, bulb and leaves; Garlic, bulb; Garlic, Great Headed, bulb; Garlic, Serpent, bulb; Kurrat; Lady’s Leek; Leek; Leek, wild; Lily, bulb; Onion, Beltsville Bunching; Onion, bulb; Onion, Chinese, bulb; Onion, fresh; Onion, green; Onion, Macrostem; Onion, Pearl; Onion, Potato, bulb; Onion, Tree, tops; Onion, Welsh, tops; Shallot, bulb; Shallot, fresh leaves; and cultivars, varieties, and/or hybrids of these

Apply this product by air at a minimum finished spray volume of 5 gallons per acre or by ground at a minimum finished spray volume of 20 gallons per acre. For optimal pest control, thorough crop coverage is essential. Add a silicone-based surfactant or horticultural oil to improve spray coverage and control.

CROP SPECIFIC INSTRUCTIONS

PEST	PRODUCT APPLICATION RATE Fl. Oz. (Lbs. a.i.)/Acre	USE INSTRUCTIONS
Thrips	4.0 – 6.4 fl. oz. (0.094 - 0.15 lbs. a.i.)	Use the higher rate in the range when you are unsure of the susceptibility of the thrips species or when the thrips species is unknown.
<p>USE RESTRICTIONS</p> <ul style="list-style-type: none"> • Maximum applications: 4 per calendar year. • Do NOT apply more than once every 7 days. • The maximum pre-transplant application rate is 0.15 pound acetamiprid per acre. • Pre-Harvest Interval (PHI) = 7 days • Do NOT apply more than 25.7 fl. oz. (0.6 lbs. a.i.) per acre per calendar year regardless of application method including pre-transplant applications. 		

POME FRUIT (Within Crop Group 11-10) – Apple; Azarole; Crabapple; Loquat; Mayhaw; Medlar; Pear; Pear, Asian; Quince; Quince, Chinese; Quince, Japanese; Tejocote; and cultivars, varieties and/or hybrids of these

Apply this product by air at a minimum finished spray volume of 10 gallons per acre or by ground at a minimum finished spray volume of 50 gallons per acre. For optimal pest control, thorough crop coverage is essential and use ground applications of complete sprays (spraying every row).

Make applications prior to the establishment of heavy infestation and before populations of insects reach harmful levels. Degree day models can be used for codling moth, leafminer, and certain other insects to determine the timing and interval of applications. Lasting pest control for labeled pests depends on the rate. Use the high rate listed in the range for best residual control. Add a spray adjuvant, like a high quality non-ionic surfactant to improve spray coverage and control. Add a horticultural oil for controlling mites, especially when conditions are favorable to an increase in mite populations. Consider mite population history and the use of other products in the orchard when evaluating whether a predisposition for mite population buildup may exist.

Additional information may be obtained from your local Crop Advisor, Extension Service representative, or a representative from Helena Chemical Company.

If under heavy pressure by any of the pests listed below, use the higher rate listed in the range.

CROP SPECIFIC INSTRUCTIONS

PEST	PRODUCT APPLICATION RATE Fl. Oz. (Lbs. a.i.)/Acre	USE INSTRUCTIONS
Aphids, Leafhoppers	2.1 – 3.2 fl. oz. (0.05 - 0.075 lbs. a.i.)	For aphids, use the higher rate in the range when you are unsure of the susceptibility of the aphid species or when the aphid species is unknown. Use of the higher rate in the range and repeat applications may be required to control woolly apple aphid. Do not apply more than 25.7 fl. oz (0.6 lb. of a.i.) per acre per calendar year of this product nor exceed a total of 4 applications per calendar year.
Tentiform Leafminer	2.1 fl. oz. (0.05 lbs. a.i.)	Apply prior to larvae reaching the tissue feeding stage.
Codling Moth, Mealybug, Mullein Plant Bug (Campylomma), Psylla	3.2 – 6.4 fl. oz. (0.075 - 0.15 lbs. a.i.)	Addition of a horticultural oil with this product has been observed to increase control of Codling Moth. For applications to control Mullein Plant Bug, do not apply when bee activity in the area is observed. Apply this product at pink bud through bloom and prior to petal fall when trying to prevent fruit damage from mullein plant bug.

		Psylla control may be suboptimal with summer applications.
European Apple Sawfly, Japanese Beetle, Lesser Apple Worm, Oriental Fruit Moth	4.3 – 6.4 fl. oz. (0.10 - 0.15 lbs. a.i.)	After application to Japanese Beetle, adult beetles will stop feeding and death will follow within a few days.
Apple Maggot, Dogwood Borer, Plum Curculio, San Jose Scale (suppression)	6.4 fl. oz. (0.15 lbs. a.i.)	For applications to control Apple Maggot, spray timing may be determined through the use of baited spheres. For applications to control Dogwood Borer, apply to tree trunks and make first application after moth emergence during egg-laying. Apply a second time 14 to 21 days later. For best results to control Plum Curculio, make one application at early petal fall followed by one or two additional thorough coverage spray applications during egg laying. Make applications to control San Jose Scale during the crawler stage for optimal pest control. Add a horticultural oil to enhance control of San Jose Scale.
USE RESTRICTIONS		
<ul style="list-style-type: none"> • Maximum applications: 4 per calendar year. • Do NOT apply more than once every 12 days. • Pre-Harvest Interval (PHI) = 7 days • Do NOT apply more than 25.7 fl. oz. (0.6 lbs. a.i.) per acre per calendar year regardless of application method. 		

STONE FRUIT (Within Crop Group 12) – Apricot; Cherry, sweet and tart; Nectarine; Peach; Plum, Chickasaw; Plum, Damson; Plum, Japanese; Plumcot; Prune, fresh

Apply this product by air at a minimum finished spray volume of 10 gallons per acre or by ground at a minimum finished spray volume of 50 gallons per acre. For optimal pest control, thorough crop coverage and complete row sprays are essential.

Lasting pest control for labeled pests depends on the rate. Use the high rate listed in the range for best residual control. Add a spray adjuvant, like a high quality silicone-based surfactant or horticultural oil to improve spray coverage and control. Degree day models in combination with pheromone traps can be used to determine the timing and interval of applications.

Additional information may be obtained from your local Crop Advisor, Extension Service representative, or a representative from Helena Chemical Company.

If under heavy pressure by any of the pests listed below, use the higher rate listed in the range.

CROP SPECIFIC INSTRUCTIONS

PEST	PRODUCT APPLICATION RATE Fl. Oz. (Lbs. a.i.)/Acre	USE INSTRUCTIONS
Aphids, Leafhoppers	2.1 – 4.3 fl. oz. (0.05 - 0.10 lbs. a.i.)	For aphids, use the higher rate in the range when you are unsure of the susceptibility of the aphid species or when the aphid species is unknown.
Glassywinged Sharpshooter	3.2 – 6.4 fl. oz. (0.075 - 0.15 lbs. a.i.)	
Oriental Fruit Moth; Peach Twig Borer; Plum Curculio; Cat-facing Insects, e.g. plant bug and stinkbug (suppression)	4.3 – 6.4 fl. oz. (0.10 - 0.15 lbs. a.i.)	Add a horticultural oil to improve spray coverage and control. For best results to control Plum Curculio, make one application at early petal fall followed by one or two additional thorough coverage spray applications during egg laying. For control of subsequent generations, refer to local suggested practices. For best results to control Oriental Fruit Moth and Peach Twig Borer, apply with oil during the delayed-dormant period prior to bud break. Follow with applications at moth flights determined using degree day models.
Cherry Fruit Fly, Black Cherry Fruit Fly, Western Cherry Fruit Fly	4.3 – 6.4 fl. oz. (0.10 - 0.15 lbs. a.i.)	For optimal control of fruit flies, suitable application timing is essential. Apply at adult emergence followed by applications at 10 day intervals through egg hatch, to not

		exceed a total of 4 applications per year.
San Jose Scale, Japanese Beetle, Rose Chafer	4.3 – 6.4 fl. oz. (0.10 - 0.15 lbs. a.i.)	For best results to control San Jose Scale, apply with horticultural oil during the delayed-dormant or dormant period. Follow with in-season applications during the crawler stage. Add a horticultural oil to application made during the crawler stage to enhance control of San Jose Scale. When using oil, refer to local suggested practices. After application to Japanese Beetle, adult beetles will stop feeding and death will follow within a few days.
USE RESTRICTIONS		
<ul style="list-style-type: none"> • Maximum applications: 4 per calendar year. • Do NOT apply more than once every 10 days. • Pre-Harvest Interval (PHI) = 7 days • Do NOT apply more than 25.6 fl. oz. (0.6 lbs. a.i.) per acre per calendar year regardless of application method. 		

LOW GROWING BERRIES (Within Crop Sub-Group 13-07G) – Bearberry; Bilberry; Blueberry, Lowbush; Cloudberry; Cranberry; Lingonberry; Muntries; Partridgeberry; Strawberry; and cultivars, varieties, and/or hybrids of these

Apply this product by air at a minimum finished spray volume of 10 gallons per acre or by ground at a minimum finished spray volume of 20 gallons per acre. For optimal pest control, thorough crop coverage is essential. If under heavy pressure by any of the pests listed below, use the higher rate listed in the range.

CROP SPECIFIC INSTRUCTIONS

PEST	PRODUCT APPLICATION RATE Fl. Oz. (Lbs. a.i.)/Acre	USE INSTRUCTIONS
Blueberry Maggot, Spanworm, Cherry Fruitworm, Cranberry Fruitworm, Flea Beetle, Japanese Beetle, Oblique Banded Leaf Roller, Plantbugs (<i>Lygus</i> spp.) Sap Beetles, Thrips, Whiteflies, Firmworm (suppression), Gypsy Moth, Sparganothis Fruitworm, Cranberry Tipworm	3.2 – 5.6 fl. oz. (0.075 - 0.13 lbs. a.i.)	Use the higher rate in the range when you are unsure of the susceptibility of the thrips species or when the thrips species is unknown.
Aphids, Leafhoppers, Spittlebug	1.5 – 3.2 fl. oz. (0.035 - 0.075 lbs. a.i.)	Use the higher rate in the range when you are unsure of the susceptibility of the aphid species or when the aphid species is unknown.
<p>USE RESTRICTIONS</p> <ul style="list-style-type: none"> • Maximum applications: 2 per calendar year. • Do NOT apply more than once every 7 days. • For cranberry bogs treated with this product, do NOT flood within 60 days after application. • Do NOT grow more than one crop of cranberries per calendar year. • Pre-Harvest Interval (PHI) = 1 day • Do NOT apply more than 11.1 fl. oz. (0.26 lbs. a.i.) per acre per calendar year regardless of application method. 		

SWEET CORN

Apply this product by air at a minimum finished spray volume of 5 gallons per acre or by ground at a minimum finished spray volume of 20 gallons per acre. For optimal control, thorough spray coverage is essential.

CROP SPECIFIC INSTRUCTIONS

PEST	PRDUCT APPLICATION RATE Fl. Oz. (Lbs. a.i.)/Acre	USE INSTRUCTIONS
Corn Flea Beetle, Northern Rootworm, Western Rootworm, Southern Rootworm, Beetles (adults), Corn (Dusky) Sap Beetle	3.2 – 4.3 fl. oz. (0.075-0.10 lbs. a.i.)	Make up to 2 applications on a 14 day interval. Do not make applications within 7 days prior to harvest. When applications are made to control Corn Flea Beetle, scout fields regularly from emergence to when corn reaches 1 foot tall. For control of Northern, Western, and Southern Rootworm and adult beetles, make applications during the corn silking period. For control of Corn (Dusky) Sap Beetle, make applications during the corn tasseling and silking periods.
Aphids, Corn Leaf Aphid and Vegetable Aphid	1.7 – 2.3 fl. oz. (0.04 - 0.054 lbs. a.i.)	Make up to 4 applications on a 14 day interval but only if applied in a tank mixture or rotated with an alternative insecticide. Do not apply within 1 day prior to harvest.
Japanese Beetle, Stink Bugs (suppression), Corn Silk Fly (suppression)	4.3 fl. oz. (0.10 lbs. a.i.)	Make up to 2 applications on a 14 day interval during corn tussling and silking. Do not apply within 7 days prior to harvest. For control of Japanese Beetle, make applications when beetles first appear. The corn crop is most susceptible to Japanese Beetle feeding during the silking period. Scout fields regularly starting when beetles first appear.
USE RESTRICTIONS <ul style="list-style-type: none"> • Maximum applications: 2 at the 3.83 fl. oz. product rate per calendar year or 4 at the 1.2 ounces product rate per calendar year. Refer to rates listed above. • Pre-Harvest Interval (PHI) = See PEST SPECIFIC INSTRUCTIONS • Do NOT apply more than 9.0 fl. oz. (0.21 Lbs. a.i.) per acre per calendar year regardless of application method. 		

TOBACCO

Apply this product by air at a minimum finished spray volume of 5 gallons per acre or by ground at a minimum finished spray volume of 20 gallons per acre. For optimal pest control, thorough crop coverage is essential. If under heavy pressure by any of the pests listed below, use the high rate listed in the range.

CROP SPECIFIC INSTRUCTIONS

PEST	PRODUCT APPLICATION RATE Fl. Oz. (Lbs. a.i.)/Acre	USE INSTRUCTIONS
Flea Beetles, Hornworms	2.1 – 3.2 fl. oz. (0.05 - 0.075 lbs. a.i.)	
Aphids	1.1 – 3.2 fl. oz. (0.025 - 0.075 lbs. a.i.)	Use the higher rate in the range when you are unsure of the susceptibility of the aphid species or when the aphid species is unknown.
FOR USE AS AN OVICIDE Budworm	2.1 – 3.2 fl. oz. (0.05 - 0.075 lbs. a.i.)	
USE RESTRICTIONS <ul style="list-style-type: none"> • Maximum applications: 4 per calendar year. • Do NOT apply more than once every 7 days. • Pre-Harvest Interval (PHI) = 7 days • Do NOT apply more than 12.8 fl. oz. (0.3 Lbs. a.i.) per acre per calendar year regardless of application method. 		

TREE NUTS (Within Crop Group 14) and PISTACHIO – Almond; Beech Nut; Brazil Nut; Butternut; Cashew; Chestnut; Chinquapin; Filbert (Hazelnut); Hickory Nut; Macadamia Nut (Bush Nut); Pecan; Walnut, Black and English (Persian) ; Pistachio

Apply this product by air at a minimum finished spray volume of 10 gallons per acre or by ground at a minimum finished spray volume of 50 gallons per acre. For optimal pest control, thorough crop coverage is essential and use complete sprays (spraying every row).

Degree day models in combination with pheromone traps can be used to determine the timing and interval of applications. Additional information may be obtained from your local Crop Advisor, Extension Service representative, or a representative from Helena Chemical Company.

If under heavy pressure by any of the pests listed below or dense foliage is present, use the high rate listed in the range.

CROP SPECIFIC INSTRUCTIONS

PEST	PRODUCT APPLICATION RATE Fl. Oz. (Lbs. a.i.)/Acre	USE INSTRUCTIONS
Aphids, Leafhoppers	2.1 – 7.7 fl. oz. (0.05 - 0.18 lbs. a.i.)	Use the higher rate in the range when you are unsure of the susceptibility of the aphid species or when the aphid species is unknown or when trying to control Black Pecan Aphid. For optimal pest control, use the higher rate in the range when applying to mature trees. Add an adjuvant to enhance spray coverage and pest control.
Glassywinged Sharpshooter, Pecan Nut Casebearer	3.2 – 5.4 fl. oz. (0.075 - 0.125 lbs. a.i.)	
Codling Moth, Oriental Fruit Moth, Peach Twig Borer, San Jose Scale, Hickory Shuckworm, Pecan Weevil, Red Humped Caterpillar, Filbertworm, Naval Orangeworm	4.3 – 7.7 fl. oz. (0.10-0.18 lbs. a.i.)	Lasting pest control for labeled pests depends on the rate. Use the high rate listed in the range for best residual control when applying to mature, tall trees with dense foliage and for best results when controlling Pecan Weevil. Add a horticultural oil to enhance control. When using oil, refer to local suggested practices. For best results to control Oriental Fruit Moth and Peach Twig Borer, apply with oil during the delayed-dormant period prior to bud break. Follow with in season applications at moth flights determined using degree day models.

		<p>For best results to control Codling Moth, make in-season applications at moth flights determined using degree day models.</p> <p>For best results to control San Jose Scale, apply with horticultural oil during the delayed-dormant or dormant period. Follow with in-season applications during the crawler stage.</p>
Walnut Husk Fly	5.1 – 6.4 fl. oz. (0.12 - 0.15 lbs. a.i.)	<p>Apply when adult egg producing (gravid) females are first observed.</p> <p>Make application with husk fly bait using the specified rate.</p> <p>Make a repeat application, if necessary, 3-4 weeks later.</p>
Gill's Mealybug	6.4 fl. oz. (0.15 lbs. a.i.)	<p>Apply in early to mid-June when crawlers first appear.</p> <p>To achieve thorough crop spray coverage, use a sufficient volume of water. For best results, use a horticultural oil or penetrating adjuvant (does not include stickers) to increase pest control.</p>
<p>USE RESTRICTIONS</p> <ul style="list-style-type: none"> • Maximum applications: 4 per calendar year. • Do NOT apply more than once every 14 days. • Pre-Harvest Interval (PHI) = 14 days • Do NOT apply more than 30.8 fl. oz. (0.72 lbs. a.i.) per acre per calendar year regardless of application method. 		

TUBEROUS AND CORM VEGETABLES (Within Crop Sub-Group 1C) – Arracacha; Arrowroot; Artichoke, Chinese; Artichoke, Jerusalem; Canna, edible; Cassava, bitter and sweet; Chayote, root; Chufa; Dasheen; Ginger; Leren; Potato; Sweet Potato; Tanier; Tumeric; Yam Bean; Yam, true

Apply this product by air at a minimum finished spray volume of 5 gallons per acre or by ground at a minimum finished spray volume of 20 gallons per acre. For optimal pest control, thorough crop coverage is essential. If under heavy pressure by any of the pests listed below or dense foliage is present, use the high rate listed in the range.

CROP SPECIFIC INSTRUCTIONS

PEST	PRODUCT APPLICATION RATE Fl. Oz. (Lbs. a.i.)/Acre	USE INSTRUCTIONS
Aphids	1.9 – 3.2 fl. oz. (0.044 - 0.075 lbs. a.i.)	Use the higher rate in the range when you are unsure of the susceptibility of the aphid species or when the aphid species is unknown. Use 2.83 ounces of this product per acre if applying through overhead sprinkler irrigation to emerged potato foliage. Refer to the DIRECTIONS FOR CHEMIGATION section of this label for more details.
Leafhoppers, Colorado Potato Beetle, Cucumber Beetle	1.1 – 3.2 fl. oz. (0.025 - 0.075 lbs. a.i.)	For Colorado Potato Beetle, use 1.66-2.83 ounces of this product per acre if applying through overhead sprinkler irrigation to emerged potato foliage. Refer to the DIRECTIONS FOR CHEMIGATION section of this label for more details. For Leafhopper, use 2.83 ounces of this product per acre if applying through overhead sprinkler irrigation to emerged potato foliage. Refer to the DIRECTIONS FOR CHEMIGATION section of this label for more details.
Flea Beetle	1.1 – 2.1 fl. oz. (0.025 - 0.05 lbs. a.i.)	
FOR USE AS AN OVICIDE European Corn Borer	2.1 – 3.2 fl. oz. (0.05 - 0.075 lbs. a.i.)	
<p>USE RESTRICTIONS</p> <ul style="list-style-type: none"> • Maximum applications: 4 per calendar year. • Do NOT apply more than once every 7 days. • If an acetamiprid seed treatment application has been made, do NOT make a foliar application to the same crop. • Pre-Harvest Interval (PHI) = 7 days • Do NOT apply more than 12.8 fl. oz. (0.3 lbs. a.i.) per acre per calendar year regardless of application method. 		

ORNAMENTAL

INTENDED FOR USE BY PROFESSIONAL APPLICATORS

FOR USE ON ORNAMENTAL PLANTS, DECIDUOUS AND EVERGREEN TREES, SHRUBS, AND VINES, ANNUAL AND PERENNIAL FLOWERING PLANTS, : bedding plants, flowers grown for cuttings, foliage plants, potted flowering plants, ornamental trees and seedlings, conifer seedlings, and non-bearing fruit and nut trees (Non-bearing crops are perennial crops that will not produce a harvestable raw agricultural commodity during the season of application).

For control of insect pests, apply either as foliar broadcast spray to obtain thorough and uniform spray coverage of the plants or via a basal bark or injection treatment. For foliar broadcast sprays, choose a finished spray volume appropriate for the size of the plants and amount of foliage which will provide thorough coverage throughout the canopy. For optimum control, allow at least 6 hours before overhead irrigation of foliage. Do not allow public use of treated area during application.

FOR FOLIAR BROADCAST SPRAYS.

Mix HM-1570 Insecticide with sufficient water and apply as a foliar spray to obtain thorough and uniform spray coverage of the plants. Choose a finished spray volume appropriate for the size of the plants and amount of foliage which will provide thorough coverage throughout the canopy. Apply as soon as insects reach treatment thresholds.

See resistance management section if multiple sprays are needed.

HM-1570 Insecticide mixes quickly in water. This product has been found to be compatible with many commonly used surfactants, miticides and insecticides. Check physical compatibility using the correct proportion of products when combining products without prior history of use.

Note: Since plant varieties are numerous and constantly changing and may react differently at various sites, test the product and any tank mixes on a small scale before making large-scale applications if there is not local experience.

ORNAMENTAL AND FLOWERING PLANTS

PEST	PRODUCT APPLICATION RATE Fl. Oz. (lbs. A.I.) / 100 Gals. Water	USE INSTRUCTIONS
Aphids , such as Green Peach, Wooly, Melon, and Cotton aphid European pine sawfly Psyllids	1.0 fl. oz. (0.023 lbs. a.i.)	Apply as a full coverage foliar spray with a nonionic spreader-sticker adjuvant. When mixing with surfactant treat a small area first to make sure the surfactant does not cause phytotoxicity.
Tentiform leaf miner Mealybugs , such as Citrus, Obscure, Longtail, Pink Hibiscus, and Maderia mealybugs Leafhoppers , such as Glassy Wing Sharpshooter and Potato Leaf Hopper	2.2 fl. oz. (0.052 lbs. a.i.)	Tank mixing with a surfactant may improve the control of mealybugs. Tank mixing with a surfactant or a pyrethroid may improve control of adult whiteflies. When mixing with surfactants, treat a small area first to make sure the surfactant does not cause phytotoxicity.
Caterpillars , such as Gypsy Moth, Tobacco Bud Worm, Fall Army Worm, Southern Army Worm, Cabbage Looper, and Diamondback Moth Hard and Soft Scales , such as Caribbean Black Scale, Pine Needle Scale, Green Shield Scale, San Jose Scale, Oyster Shell Scale, Tea Scale, Fletcher Scale, Florida Wax and Indian Wax Scales, Cottony Maple Scale, Euonymus Scale and Asian Cycad Scale Plant bugs, Adelgids, Whiteflies , such as Greenhouse, Sweet Potato, Silverleaf, Banded, and Giant	2.2 – 4.2** fl. oz. (0.052 – 0.097 lbs. a.i.)	
Swede Midge	2.2 – 4.2** fl. oz. (0.052 – 0.097 lbs. a.i.)	Apply as a preventative spray to control the first generations if Swede Midge has been found in your area. Preventative applications will decrease the chance of quick population increases later in the season.
Fungus gnat larvae, Crane fly larvae	2.2 – 4.2** fl. oz. (0.052 – 0.097 lbs. a.i.)	Apply as a directed spray to thoroughly wet the upper 1/2 to 1 inch of soil media.
Citrus thrips Other thrips , such as Cotton, Palm, and Western Flower thrips Leaf Eating Beetles (adults), such as Japanese Beetle, European Chafer and Oriental Beetle**, Strawberry Weevils	3.2 – 6.5** fl. oz. (0.075 – 0.155 lbs. a.i.)	Tank mixing with a surfactant will improve control. When mixing with surfactant treat a small area first to make sure the surfactant does not cause phytotoxicity.
Leaf miners , such as Chrysanthemum and Citrus Leaf Miner	5.4 – 6.5** fl. oz. (0.125 – 0.155 lbs. a.i.)	Rotate or tank mix with Avid®, Conserve™, Pedestal™, Distance®, Enstar®, or Talus®. Tank mixing with a surfactant may improve control. When mixing with surfactant treat a small area first to make sure the surfactant does not cause phytotoxicity.
USE RESTRICTIONS <ul style="list-style-type: none"> • Do not make more than 4 applications per year. • Do not reapply more than once every 7 days. To determine if application is necessary, monitor pest densities. Consult local extension experts for thresholds. • Do not apply more than 6.5 fl. oz. of HM-1570 Insecticide per acre (0.155 lb ai/A) in a single application. • Do not apply more than 23.5 fl. oz. of HM-1570 Insecticide per acre (0.556 lb ai/A) per year. • Do not apply to bearing fruit trees. 		

* Product can be applied with the water volume needed to provide thorough coverage.

** Use the higher rate when insect pressure is high.

GREENHOUSE-GROWN TOMATO PRODUCTION

HM-1570 Insecticide may be applied by injection into drip-irrigation or micro-irrigation (spaghetti tube or emitter) systems, soil drenching, or by hand-held or motorized calibrated or motorized calibrated irrigation equipment directed to the plant roots for control of various insect pests on mature tomato plants grown in greenhouses.

Application should be made only to mature tomato plants grown in non-soil media such as rock wool, vermiculite, perlite, or other soil-less media. Many cultivars of vegetables show good safety to HM-1570 Insecticide. However, some cultivars may exhibit sensitivity and therefore treatment of a few plants is recommended prior to treating an entire greenhouse.

	PEST	PRODUCT APPLICATION RATE Fl. Oz. (Lbs. A.I.) / 100 Gals. Water	USE INSTRUCTIONS
Greenhouse-grown tomatoes (mature plants)	Whiteflies Psyllids Thrips Aphids	0.3 fl. oz. (0.007 lbs. a.i.)	Make the application when insect pressure exceeds threshold levels.
USE RESTRICTIONS			
<ul style="list-style-type: none"> Do not make more than one (1) application per crop. Do not apply less than one (1) day before harvest. Do not exceed a total of 3.2 fl. oz. (0.075lb ai)/acre/crop based on 10,000 plants per acre. 			

CONDITIONS OF SALE - LIMITED WARRANTY AND LIMITATIONS OF LIABILITY AND REMEDIES
Read the Conditions of Sale - Warranty and Limitations of Liability and Remedies before using this product. If the terms are not acceptable, return the product, unopened, and the full purchase price will be refunded.

The directions on this label are believed to be reliable and must be followed carefully. Insufficient control of pests and/or injury to the crop to which the product is applied may result from the occurrence of extraordinary or unusual weather conditions or the failure to follow the label directions or good application practices, all of which are beyond the control of Helena Chemical Company (the "Company") or seller. In addition, failure to follow label directions may cause injury to crops, animals, man or the environment. The Company warrants that this product conforms to the chemical description on the label and is reasonably fit for the purpose referred to in the directions for use subject to the factors noted above which are beyond the control of the Company. To the extent consistent with applicable law, The Company makes no other warranties or representations of any kind, express or implied, concerning the product, including no implied warranty of merchantability or fitness for any particular purpose, and no such warranty shall be implied by law.

The exclusive remedy against the Company for any cause of action relating to the handling or use of this product shall be limited to, at Helena Chemical Company's election, one of the following:

1. Refund of the purchase price paid by buyer or user for product bought, or
2. Replacement of the product used

To the extent consistent with applicable law, the Company shall not be liable and any and all claims against the Company are waived for special, indirect, incidental, or consequential damages or expense of any nature, including, but not limited to, loss of profits or income. The Company and the seller offer this product and the buyer and user accept it, subject to the foregoing conditions of sale and limitation of warranty, liability and remedies.